

REPORT
OF THE
DEPARTMENT OF HEALTH
OF THE
PANAMA CANAL
FOR THE
MONTH OF APRIL, 1916

E. E. PERSONS

Major, Medical Corps, United States Army, Acting
Chief Health Officer, Balboa Heights, Canal Zone

Gift of the Panama Canal Museum

WASHINGTON
1916



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LETTER OF TRANSMITTAL.

THE PANAMA CANAL, CANAL ZONE,
HEALTH DEPARTMENT,
Balboa Heights, May 16, 1916.

Maj. Gen. GEO. W. GOETHALS,
*Governor The Panama Canal,
Balboa Heights, Canal Zone.*

SIR: I have the honor to submit the following report of the operations of the Department of Health for the month of April, 1916.

Very respectfully,

E. E. PERSONS,
Acting Chief Health Officer.

GENERAL REMARKS.

No cases of yellow fever, smallpox, or plague originated on or were brought to the Isthmus during the month.

VITAL STATISTICS.

The health of the employees remained good during the month. The number of names on the rolls for the preceding month was 33,656.

The total number of admissions to hospitals and quarters was 586, a rate of 207.70 per thousand, as compared with 290.53 per thousand for the preceding month, and 282.02 per thousand for the corresponding month of last year.

The total number of deaths from all causes was 23, of these 18 died from disease, or 6.38 per thousand, as compared with 5.80 for the preceding month, and 1.76 for the corresponding month of last year.

The constantly noneffective rate was 9.81, compared with 10.77 for the preceding month, and 9.85 for the corresponding month of last year.

The total admission rate for malaria, hospitals, and quarters, was 7.80, compared with 6.89 for last month, and 28.48 for the corresponding period of last year; and the total noneffective rate 0.26, compared with 0.35 for last month, and 0.95 for April, 1915.

The five diseases causing the highest admission rates in the order of their numerical importance were: Venereal diseases, diseases of the digestive system, diseases of the respiratory system, diseases of the nervous system, and nonvenereal diseases of the genito-urinary system. These five classes of diseases caused 40 per cent of all admissions to hospitals. Six per cent of all admissions to hospitals was caused by malaria.

The admission rate for typhoid fever was 1.77, compared with 0.36 for last month, and 0.35 for the corresponding period of last year.

EFFECTS OF RACE.

The admission rate to hospital and the death rate for disease for black employees were 60.40 and 6.99 per thousand, as compared with 96.44 and 0.82 for the corresponding period of last year; for white employees 221.89 and 2.58, as compared with 240.84 and 7.37 for the month of April last year.

The admission rate to hospitals and quarters for malaria was 5.34 per thousand for blacks and 23.22 for whites, compared with 24.62 per thousand for blacks and 51.61 for whites for the corresponding month of last year.

The death rate for Americans was 5.62, and the admission rate to hospitals for disease was 202.22, as compared with 5.64 and 211.52 for April, 1915.

Following is a table giving ages of all male gold employees of the Panama Canal and the Panama Railroad Co., as shown by annual physical examination, November 20, 1915:

DEPORTATIONS.

Age (years)	Number of employees.	Age (years).	Number of employees.
16.....	7	45.....	104
17.....	8	46.....	70
18.....	11	47.....	47
19.....	17	48.....	40
20.....	29	49.....	48
21.....	27	50.....	38
22.....	46	51.....	42
23.....	58	52.....	25
24.....	74	53.....	11
25.....	108	54.....	12
26.....	125	55.....	15
27.....	149	56.....	10
28.....	147	57.....	6
29.....	173	58.....	4
30.....	190	59.....	7
31.....	163	60.....	3
32.....	158	61.....	3
33.....	157	62.....	2
34.....	131	63.....	4
35.....	169	64.....	2
36.....	129	65.....	2
37.....	141	67.....	1
38.....	147	69.....	1
39.....	151	70.....	1
40.....	130	72.....	2
41.....	98	76.....	1
42.....	95		
43.....	113	Total employees examined.....	3,548
44.....	96		

Nine employees were deported during the month; for disease 8, and for injury 1. Three nonemployees were deported, all for disease.

CANAL ZONE.

The population of the Canal Zone is 32,905, among whom there was a total of 25 deaths; of these 22 deaths were from disease, giving a rate of 8.02 per thousand, as compared with 9.28 for the preceding month, and 5.71 for the corresponding month of last year. Of the total deaths from disease, the percentage under five years of age was 32, as compared with 27 for last month.

There were 40 births reported, giving a rate of 14.59. Of these 7 were of white and 33 of colored children. There were 5 deaths of children under one year of age, all colored, giving an infant mortality of 0.00 for white and 152 for colored children, with a general average of 125. The percentage of stillbirths to total births was 5 per cent.

PANAMA CITY.

The population of the city is 60,778, among whom there was a total of 129 deaths; of these 124 deaths were from disease, giving a percentage of 24.48 per thousand, as compared with 23.29 for the preceding month, and 25.44 for the corresponding period of last year.

Of the total deaths from disease the percentage under 5 years of age was 41 per cent, compared with 40 for last month.

The principal causes of deaths showing an increase as compared with March were: Tuberculosis of the lungs 24, compared with 23 for the preceding month; diarrhea and enteritis 19, compared with 12 for last month; and cerebral hemorrhage 5, as compared with 2 for the month of March.

The percentage of stillbirths to total births was 11 per cent.

COLON.

The population of the city is 24,693, among whom there were 60 deaths; of these 55 deaths were from disease, giving a rate of 26.73 per thousand, as compared with 18.95 for the preceding month, and 19.64 for the corresponding month of last year. Of the total deaths from disease the percentage under 5 years of age was 44 per cent, as compared with 33 for last month.

The principal causes of deaths showing an increase as compared with March were: Broncho-pneumonia 7, compared with 4 for the preceding month; diarrhea and enteritis 6, compared with 1 for last month; and cerebral hemorrhage 3, as compared with 1 for the month of March.

There were 54 births reported, giving a rate of 26.24 per thousand. The infant mortality was 277 per thousand. The percentage of stillbirths to total births was 11 per cent.

HOSPITAL DIVISION.

ANCON HOSPITAL.

During the month the average number of patients constantly in hospital was 743. The per capita cost of patients in hospital proper was \$1.92 gross, and \$0.87 net. The net per capita cost of patients in the insane asylum was \$0.49 per day.

BOARD OF HEALTH LABORATORY.

The following work, in addition to routine, has been accomplished during the month:

The results of the investigation into the corrosion of metals indicate very clearly that cast brass, sheet brass, copper, and lead are corroded by dilute solutions of bleaching powder, acetic, nitric, and hydrochloric acids. These acids and bleaching powder are used extensively in the hospital and eventually find their way into the waste pipes of plumbing fixtures. The corrosion was more marked when the metals were only partially submerged, and also when they were submerged intermittently with intervening opportunities for drying. Under these conditions, the metal showing the most pronounced degree of corrosion was lead.

Preliminary steps have been taken in the preparation of colloid-gold solutions for use in the diagnosis of paresis.

INSANE DEPARTMENT.

During the month there were 13 admissions, 10 discharges, and 5 deaths. Included in these figures are 3 retransfers from Ancon Hospital, and 2 transfers to Ancon Hospital for surgical treatment. There were two deportations to the United States and one to the Philippines.

Authority for an additional medical officer trained in psychiatry has been granted. One has been selected from the staff of the Government Hospital for the Insane, and will report for duty during the month of May.

The general health of the patients and cripples remains good.

The small mouth milk pails for use in the dairy have arrived and have aided greatly in the improvement of the milk. At present the bacterial count runs between 2,000 and 3,000 per c. c., which would be considered unusually good milk anywhere.

The carpenter shop has been completed, the construction of the compost pit is well under way, and the work on the grounds is progressing rapidly.

CHRONIC WARD.

There were 31.20 chronic and incurable patients constantly cared for during the month. The cost per patient per day was \$0.22.

Detailed statistics are shown in Table XIII.

COLON HOSPITAL.

The average number of employees constantly sick was 17.96. The average number of days treatment per employee was 9.08. The per capita cost of patients was \$3.34 gross and \$2.50 net.

Detailed statistics are shown in Table XIV.

PALO SECO LEPER ASYLUM.

The number of patients under treatment at the end of the month was 57. There were no admissions, deaths, or discharges during the month.

Detailed statistics are shown in Table XV.

SANTO TOMAS HOSPITAL.

During the month a total of 1,205 patients were treated, 95 less than the preceding month. The daily average number of patients in the hospital was 426 as compared with 445 for March, and the total number of days treatment was 12,794 as compared with 13,803 for the preceding month. A total of 69 deaths occurred, with tuberculosis of the lungs, congenital debility, and pneumonia, the chief causes in the order named.

Detailed statistics are shown in Table XVI.

DISTRICT DISPENSARIES.

The dispensary having the highest admission rate for malaria was Pedro Miguel with a percentage of 0.05. No malaria cases were reported from the following districts: Ancon, Culebra-Empire, and Gatun.

SANITATION.

CANAL ZONE.

The following communicable diseases were reported during the month:

Measles.....	7	Tuberculosis.....	7
Typhoid fever.....	2	Leprosy.....	1
Chicken pox.....	11	Diarrhea.....	6
Diphtheria.....	1	Pneumonia.....	1
Malaria fever.....	53		

PANAMA.

During the month the work of cementing tree cavities was undertaken, as this has been recognized as an important antimosquito measure, but had not been undertaken before in Panama City.

In the city 1,611 trees were treated, plugging such cavities as might become "containers" on account of holding water. A cement and sand mixture of 1-4 was used to close the cavities. Where large holes were found pieces of rock were used to fill in, reducing amount of cement needed. Count was kept on about

1,000 trees to determine the number of cavities per tree which during the rainy season would act as water containers with consequent mosquito breeding. An average of 2.55 holes per tree was found, and using this figure for total number of trees treated, we find that 4,108 possible containers were eliminated. The large trees presented the greater number of cavities, naturally, and decayed places where limbs had been broken off, and in the angles formed by branching were to be found the most frequent sites. As many as 22 cavities were found in one tree requiring filling.

It is interesting to report that quite a number of the cavities found, even at this season of very little rain, contained mosquito larvæ, and larva from several of these were identified later as *Stegomyia*. *Stegomyia* were only found, however, in trees quite close to houses.

The following infectious diseases were reported during the month:

Tuberculosis, pulmonary.....	31	Mumps.....	1
Tuberculosis, other forms.....	2	Chicken pox.....	11
Diphtheria.....	4	Leprosy.....	1
Pellegra.....	1	Measles.....	4
Syphilis.....	3	Typhoid fever.....	3
Whooping cough.....	1		

COLON.

A concrete compost pit, with a capacity of 100 cubic yards for "curing" manure prior to use by local gardeners and farmers, has been erected at the municipal dump. It is believed that this pit will prove an important addition to the sanitary armamentarium in preventing fly breeding.

An arrangement has been effected with the *alcalde* of Colon whereby we hope to eliminate the dog nuisance in the city. The Health Department furnishes two silver employees as dog catchers and the municipal authorities furnish a policeman. The measure is directed particularly against the unlicensed dogs. After apprehension the dogs are held for 24 hours at the city dump awaiting the claim of their owners; but if not reclaimed by the payment of a redemption fee they are killed. Since the beginning of the month we have caught 178 dogs; of these only 22 have been reclaimed.

The following infectious diseases were reported during the month:

Measles.....	3	Tuberculosis.....	2
Malaria.....	3	Paratyphoid fever.....	1
Scarlet fever.....	1	Pneumonia.....	2

QUARANTINE SERVICE.

Reports of conditions on the west coast of South America are not reassuring. The yellow fever situation in Buenaventura and Guayaquil has shown no improvement during the month. An increase in the number of plague cases at several ports is noted this increase being very generally distributed.

TABLE I.—ADMISSIONS, DEATHS, AND NONEFFECTIVE RATES FOR EMPLOYEES; DEATHS OF RESIDENTS OF PANAMA, COLON, AND THE CANAL ZONE.

ABSOLUTE NUMBERS.

	Number of employees. ¹	Admissions to hos- pitals.			Deaths.			Noneffect- ive from sickness.	
		Total.	Disease.	Ex ternal causes.	Total.	Disease.	Ex ternal causes.	Days treated.	Constantly noneffective.
<i>April, 1916.</i>									
White	4, 651	99	86	13	3	1	2	2, 551	85.02
Colored	29, 205	210	147	63	20	17	3	7, 409	246.98
Total	33, 856	309	233	76	23	18	5	9, 960	332.00
<i>March, 1916.</i>									
White	4, 514	116	95	21	4	4	.....	2, 842	91.68
Colored	28, 570	301	195	106	16	12	4	8, 198	264.44
Total	33, 084	417	290	127	20	16	4	11, 040	356.12
<i>April, 1915.</i>									
White	4, 883	128	98	30	4	3	1	2, 561	85.37
Colored	29, 242	329	235	94	4	2	2	7, 523	250.77
Total	34, 125	457	333	124	8	5	3	10, 084	336.14

PROPORTIONATE NUMBERS.²

<i>April, 1916.</i>									
White	4,651	255.43	221.89	33.54	7.74	2.58	5.16	.....	18.29
Colored	29,205	86.29	60.40	25.89	8.22	6.99	1.23	.....	7.29
Total	33,856	109.52	82.58	26.94	8.15	6.38	1.77	.....	9.81
<i>March, 1916.</i>									
White	4,514	311.13	254.80	56.33	10.63	10.63	.....	.....	20.31
Colored	28,570	126.43	81.90	44.53	6.72	5.04	1.68	.....	9.26
Total	33,084	151.25	105.19	46.06	7.25	5.80	1.45	.....	10.77
<i>April, 1915.</i>									
White	4,883	314.56	240.84	73.72	9.83	7.37	2.46	.....	17.49
Colored	29,242	135.01	96.44	38.57	1.64	.82	.82	.....	8.57
Total	34,125	160.70	117.10	43.60	2.81	1.76	1.05	.....	9.85

¹ Number of employees is based on the number of names appearing on the pay rolls for the month of April, to which is added the number of employees of contractors engaged in work for the Panama Canal, who have hospital privileges.

² Annual average per thousand.

TABLE I.—DEATHS OF RESIDENTS OF THE CITIES OF PANAMA, COLON, AND THE CANAL ZONE—Continued.

Place.	Popula- tion.	Deaths.			Annual average per 1,000.		
		Total.	Dis- ease.	Ex- ternal causes.	Total.	Dis- ease.	Ex- ternal causes.
<i>April, 1916.</i>							
Panama.....	60,778	129	124	5	25.47	24.48	0.99
Colon.....	24,693	60	55	5	29.16	26.73	2.43
Canal Zone.....	32,905	25	22	3	9.12	8.02	1.10
Total.....	118,376	214	201	13	21.69	20.37	1.32
<i>March, 1916.</i>							
Panama.....	60,778	120	118	2	23.69	23.29	.40
Colon.....	24,693	43	39	4	20.89	18.95	1.94
Canal Zone.....	32,336	29	25	4	10.76	9.28	1.48
Total.....	117,807	192	182	10	19.56	18.54	1.02
<i>April, 1915.</i>							
Panama.....	60,373	133	128	5	26.43	25.44	.99
Colon.....	29,331	54	48	6	22.09	19.64	2.45
Canal Zone.....	33,652	18	16	2	6.42	5.71	.71
Total.....	123,356	205	192	13	19.13	17.87	1.26

TABLE II.—DEATHS BY AGE, COLOR, AND SEX.

	White.			Colored.			Yellow.			Totals.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Under 1 year.....	4	3	7	20	29	49				24	32	56
1 to 4 years.....	6	1	7	13	6	19				19	7	26
5 to 10 years.....				2	2	4				2	2	4
11 to 20 years.....				7	6	13				7	6	13
21 to 30 years.....	4	2	6	22	11	33				26	13	39
31 to 40 years.....	3		3	10	12	22	2		2	15	12	27
41 to 50 years.....	2	1	3	11	10	21	2		2	15	11	26
51 to 60 years.....				6	5	11	1		1	7	5	12
61 to 70 years.....	1	1	2	1		1				2	1	3
71 to 80 years.....	1	2	3		1	1				1	3	4
91 to 100 years.....												
100 to 105 years.....				1		1				1		1
Not stated.....				3		3				3		3
Total.....	21	10	31	96	82	178	5		5	122	92	214

TABLE III.—DEATHS BY NATIONALITY.

Nations.	Em- ployees.	Nonem- ployees.	Total.
Antigua.....	2	2	4
Barbados.....	2	38	40
British Honduras.....		1	1
Chile.....		1	1
China.....		5	5
Colombia.....		9	9
Demarara.....		3	3
Greece.....		1	1
Grenada.....		2	2
Guadeloupe.....		1	1
India.....		1	1
Italy.....		2	2
Jamaica.....	13	44	57
Montserrat.....		1	1
Martinique.....		2	2
Mexico.....		1	1
Nassau.....		2	2
Panama.....	2	55	57
Peru.....		1	1
St. Lucia.....	1	6	7
St. Thomas.....		1	1
St. Vincent.....		1	1
Spain.....		4	4
Trinidad.....	1	2	3
United States.....	2	1	3
Venezuela.....		3	3
Unknown.....		1	1
Total.....	23	191	214

TABLE IV.—DEATH RATE AMONG AMERICANS ON THE ISTHMUS
CONNECTED WITH THE PANAMA CANAL.

	Number of deaths.	Annual average per 1,000.
White employees from the United States (4,273):		
Disease.....	0	.....
External causes.....	2	5.62
All causes.....	2	5.62
White women and children from the United States (3,535):		
Disease.....	0	.....
External causes.....	0	.....
All causes.....	0	.....
White employees and their families from the United States (7,808):		
Disease.....	0	.....
External causes.....	2	3.07
All causes.....	2	3.07
Total number of Americans on the Canal Zone (including soldiers) (14,698):		
Disease.....	1	.82
External causes.....	2	1.63
All causes.....	3	2.45

TABLE V.—CAUSES OF DEATHS OF EMPLOYEES OF THE PANAMA
CANAL AND PANAMA RAILROAD CO.

Causes of death.	White.	Colored.	Total.
<i>Disease.</i>			
Lobar pneumonia.....		6	6
Bright's disease (chronic nephritis).....		1	1
Softening of the brain.....		1	1
Pyelitis.....		1	1
Cerebral hemorrhage.....	1	2	3
Organic disease of the heart.....		1	1
Typhoid fever.....		1	1
Disseminated tuberculosis.....		1	1
Carbuncle of the back.....		1	1
Uremia.....		1	1
Tuberculosis of the lungs.....		1	1
<i>External causes.</i>			
Drowning, accidental.....	1	2	3
Railroad traumatism, accidental.....		1	1
Traumatism by fall.....	1		1
Total.....	3	20	23

TABLE VI.—CAUSES OF DEATHS OF CIVIL POPULATION (EMPLOYEES AND NONEMPLOYEES) AND MILITARY AND PLACES WHERE CHARGEABLE.

Disease.	Panama.	Colon.	Canal Zone.	Total.
<i>General diseases.</i>				
Typhoid fever.....	1			1
Malarial fever, estivo-autumnal.....		1		1
Measles.....	1	1		2
Whooping cough.....		1		1
Pyemia.....	1			1
Septicemia.....	1	2		3
Pellagra.....	3		1	4
Beriberi.....	1			1
Tuberculosis of the lungs.....	24	5	1	30
Tuberculous meningitis.....	1			1
Disseminated tuberculosis.....	1	2		3
Syphilis, tertiary.....	1			1
Syphilis, hereditary.....	2	1		3
Syphilis, period not stated.....	1			1
Cancer and other malignant tumors of the peritoneum, intestines, rectum.....		1		1
Cancer and other malignant tumors of breast.....	1			1
Cancer and other malignant tumors of other organs and of organs not specified.....		1		1
Acute articular rheumatism.....	1			1
Anemia, primary, pernicious.....		1		1
Anemia, secondary, cause not specified.....		1		1
Alcoholism, chronic.....	1			1
<i>Diseases of the nervous system and of the organs of special sense.</i>				
Simple meningitis.....	1			1
Other diseases of the spinal cord.....	1			1
Cerebral hemorrhage, apoplexy.....	2	3	2	7
Softening of the brain.....			1	1
Other forms of mental alienation.....	1			1
Epilepsy.....		1		1
<i>Diseases of the circulatory system.</i>				
Acute endocarditis.....	1			1
Malignant endocarditis.....	1			1
Organic diseases of the heart.....	6	2	1	9
Arteriosclerosis.....	3			3
Diseases of the lymphatic system.....	1			1
<i>Diseases of the respiratory system.</i>				
Acute bronchitis.....	3	2	1	6
Chronic bronchitis.....		2		2
Broncho-pneumonia.....	6	7	4	17
Pneumonia (unqualified).....	2			2
Lobar pneumonia.....	3	3	3	9
Abscess of lungs.....			1	1
<i>Diseases of the digestive system.</i>				
Diseases of the esophagus.....	1			1
Chronic gastritis.....		1		1
Diarrhea and enteritis (under 2 years).....	19	6	1	26
Intestinal obstruction.....	1			1
Other diseases of the intestines.....	1			1
Abscess of liver (unqualified).....	1			1
Simple peritonitis (nonpuerperal).....	2	1		3

TABLE VI.—CAUSES OF DEATHS OF CIVIL POPULATION (EMPLOYEES AND NONEMPLOYEES) AND MILITARY AND PLACES WHERE CHARGEABLE—Continued.

Disease.	Pan-ama.	Colon.	Canal Zone.	Total.
<i>Nonvenereal diseases of the genito-urinary system and annexa.</i>				
Acute nephritis.....	1	1	.....	2
Bright's disease (chronic nephritis).....	5	2	3	10
Other diseases of the kidneys and annexa.....	.....	1	.....	1
Pyelo-nephrosis.....	.....	1	.....	1
Cystitis.....	2	.....	1	3
Salpingitis and other diseases of the female genital organs.....	1	.....	.....	1
<i>The puerperal state.</i>				
Other accidents of labor.....	.....	1	.....	1
Puerperal albuminuria and convulsions.....	.....	1	.....	1
<i>Diseases of the skin and of the cellular tissue.</i>				
Carbuncle.....	1	.....	.....	1
<i>Diseases of the bones and of the organs of locomotion.</i>				
Osteomyelitis.....	1	.....	.....	1
<i>Mulformations.</i>				
Congenital malformations (stillbirth not included).....	1	.....	.....	1
<i>Diseases of early infancy.</i>				
Newborn child.....	1	.....	.....	1
Premature birth.....	5	.....	.....	5
Congenital debility.....	2	.....	.....	2
Malnutrition.....	3	.....	2	5
Other causes peculiar to early infancy (including various consequences of labor).....	1	.....	.....	1
<i>Affections produced by external causes.</i>				
Suicide by poisoning.....	1	.....	.....	1
Suicide by firearms.....	.....	1	.....	1
Other acute poisonings.....	1	.....	.....	1
Burns (conflagration excepted).....	1	.....	.....	1
Accidental drowning.....	.....	2	1	3
Traumatism by fall.....	1	.....	1	2
Traumatism by other crushings.....	.....	1	.....	1
Railroad traumatism.....	1	.....	1	2
Homicide by firearms.....	.....	1	.....	1
<i>Ill-defined diseases.</i>				
Cause of death not specified or ill defined.....	3	3	.....	6
Total.....	129	60	25	214
Stillbirths.....	14	6	2	22
Grand total.....	143	66	27	236

DEATHS OF NONRESIDENTS.¹

Residence.	Nationality.	Color.	Sex.	Age.	Diagnosis.
Interior of Panama.	Panaman.	Black...	Female.	52	Mitral insufficiency.
Do.....	do.....	do.....	Male....	18	Fever, undetermined.
Do.....	Chinese...	Yellow...	do.....	65	Cirrhosis of liver.
Do.....	Panaman.	Black....	do.....	80	Lobar pneumonia.
Do.....	do.....	White....	do.....	49	Intestinal obstruction.
Steamship Kiyomaru (passenger)	Chinese...	Yellow...	do.....	45	Pulmonary tuberculosis.
New York State....	American.	White....	do.....	55	Angina pectoris.
Lima, Peru.....	Peruvian..	do.....	do.....	62	Pulmonary tuberculosis.
Interior of Panama.	Panaman.	Black....	do.....	17	Cerebral tumor.

¹ Deaths of nonresidents are not included in the statistical charts relating to the cities of Panama and Colon or of the Canal Zone.

TABLE VII.—TABLE SHOWING ADMISSIONS AND DEATHS

Diseases.	Ancon Hospital.											
	Employees.						Nonemployees.					
	Admissions.			Deaths.			Admissions.			Deaths.		
	White.			White.			White.			White.		
	Americans.	Europeans.	Black.	Americans.	Europeans.	Black.	Soldiers.	Others.	Black.	Soldiers.	Others.	Black.
<i>General diseases.</i>												
Typhoid fever.....		1	1			1		1	1			
Relapsing fever.....								1				
Malarial fever, estivoautum- nal.....			5				15		1			
Malarial fever, tertian.....	3		4				10					
Malarial fever, quartan.....							1					
Malarial fever, clinical.....							11					
Measles.....			2						5			
Diphtheria and croup.....							1	2	1			
Influenza.....	2	1	1						1			
Dysentery.....												
Dysentery, entamoebic.....	1		1				2	1				
Dysentery, unclassified.....									2			
Leprosy.....			1									
Chicken pox.....			2						4			
Mumps.....			1									
Yaws.....			1									
Pyemia.....									1			1
Anthrax.....			1									
Pellagra.....									1			3
Tuberculosis of the lungs...	2	1	4			1			1			1
Disseminated tuberculosis...			1			1						1
Syphilis, primary.....			3				1	1				
Syphilis, secondary.....			2				4	1				
Syphilis, tertiary.....			5						3			1
Syphilis, period not stated...			2						1			
Gonococcus infection.....								1	1			
Gonorrhea.....		2	11				17	5				
Gonorrheal arthritis.....		1						1				
Gonorrheal bulbo.....							1					
Gonorrheal orchitis and epididymitis.....	1		1									
Soft chancre.....		1	4				12	2				
Adenitis chancroidal.....			2									
Cancer and other malignant tumors of the stomach and liver.....			1						2			
Cancer and other malignant tumors of the peritoneum, intestines, rectum.....			1									
Cancer and other malignant tumors of the female geni- tal organs.....									1			

TABLE VII.—TABLE SHOWING ADMISSIONS AND DEATHS

Diseases.	Ancon Hospital.											
	Employees.						Nonemployees.					
	Admissions.			Deaths.			Admissions.			Deaths.		
	White.			White.			White.			White.		
	Americans.	Europeans.	Black.	Americans.	Europeans.	Black.	Soldiers.	Others.	Black.	Soldiers.	Others.	Black.
<i>Diseases of the circulatory system—Continued.</i>												
Varicocele.....							3					
Lymphadenitis (nonvenereal).....			1				2		1			
Hemorrhage: other diseases of the circulatory system.....			1									
<i>Diseases of the respiratory system.</i>												
Diseases of the nasal fossæ..	5						3	4	1			
Acute bronchitis.....		1					1	2				
Chronic bronchitis.....	1											
Lobar pneumonia.....			4			3						
Pleurisy.....			1						1			
Asthma.....			1									
Abscess of lungs.....	1									1		
<i>Diseases of the digestive system.</i>												
Diseases of the mouth and annæa.....												
Diseases of the teeth and gums.....			1									
Stomatitis.....							1	2	1			
Diseases of the pharynx.....							3					
Follicular tonsillitis.....	5		1				6	15	6			
Gastroæctasis.....							1					
Acute gastritis.....								1				
Chronic gastritis.....								2				
Diarrhea and enteritis (under 2 years).....								1				
Colitis.....			2					1	1			
Diarrhea and enteritis (2 years and over).....	2								1			
Colitis.....			1					1				
Ankylostomiasis.....			1									
Intestinal parasites.....								1				
Acute appendicitis.....	1						4					
Chronic appendicitis.....							1	3				
Inguinal hernia.....	1		1				3		1			
Intestinal obstruction.....							1					

IN THE HOSPITALS OF THE PANAMA CANAL—Continued.

Colon Hospital.												Total.											
Employees.						Nonemployees.						Employees.						Nonemployees.					
Admis- sions.			Deaths.			Admis- sions.			Deaths.			Admis- sions.			Deaths.			Admis- sions.			Deaths.		
W.			W.			W.			W.			W.			W.			W.			W.		
Americans.	Europeans.	Black.	Americans.	Europeans.	Black.	Soldiers.	Others.	Black.	Soldiers.	Others.	Black.	Americans.	Europeans.	Black.	Americans.	Europeans.	Black.	Soldiers.	Others.	Black.	Soldiers.	Others.	Black.
																		3					
													1					2		1			
													1										
												5	1	1				3	4	1			
												1						1	2	1			
													8										
													1										
												1	1										
1												1											
												1									1		
							1											1					
														1									
																		1	2	1			
													5		1			3	6	15	6		
1											1							1					
																			1				
																			2				
																			1	1			
1																							
																			1				
																			1	2			
																			1				

TABLE VII.—TABLE SHOWING ADMISSIONS AND DEATHS

Diseases.	Ancon Hospital.											
	Employees.						Nonemployees.					
	Admissions.			Deaths.			Admissions.			Deaths.		
	White.			White.			White.			White.		
	Americans.	Europeans.	Black.	Americans.	Europeans.	Black.	Soldiers.	Others.	Black.	Soldiers.	Others.	Black.
<i>Diseases of the digestive system—Continued.</i>												
Other diseases of the intestines.....	2		1				3	4	2			
Constipation.....	1							3				
Biliary calculi.....								1				
Other diseases of the liver.....	2		1					1				
Abscess of liver (unqualified).....								1				
Cholecystitis.....		1										
Simple peritonitis (non-puerperal).....												
<i>Nonvenereal diseases of the genito-urinary system and annexa.</i>												
Acute nephritis.....							1		1			
Bright's disease (chronic nephritis).....			1			1			2			3
Other diseases of the kidney and annexa.....								3	2			
Pyelo-nephrosis.....								1				
Diseases of the bladder.....												
Cystitis.....	1							2	2			
Diseases of the urethra, urinary abscess, etc.....			3					1				
Stricture of the urethra, nonvenereal.....	1		1						2			
Chronic prostatitis.....								1				
Nonvenereal diseases of the male genital organs.....	3		1				1	1	2			
Hydrocele.....	1							1				
Uterine hemorrhage (non-puerperal).....								1				
Uterine tumor (noncancerous).....									2			
Other diseases of the uterus.....	2							7	4			
Cysts and other tumors of the ovary.....									1			
Salpingitis and other diseases of the female genital organs.....									10			1

TABLE VII.—TABLE SHOWING ADMISSIONS AND DEATHS

Diseases.	Ancon Hospital.											
	Employees.						Nonemployees.					
	Admissions.			Deaths.			Admissions.			Deaths.		
	White.			White.			White.			White.		
	Americans.	Europeans.	Black.	Americans.	Europeans.	Black.	Soldiers.	Others.	Black.	Soldiers.	Others.	Black.
<i>Nonvenereal diseases of the genito-urinary system and annexa—Continued.</i>												
Nonpuerperal diseases of the breast (cancer excepted).....								1				
Benign tumor of breast.....								1				
<i>The puerperal state.</i>												
Normal labor.....								8	4			
Accidents of pregnancy.....								1	2			
Hyperemesis gravidarum.....									1			
Abortion.....								2	1			
Other accidents of labor.....												1
Puerperal albuminaria and convulsions.....												
Furuncle.....			1				1	1				
Carbuncle.....	2		1			1						
Acute abscess.....			1				4					
Phlegmon and cellulitis.....	1		3				4	2				
Dhobie itch.....								2	1			
Ulcer of the skin.....			1					1				
Ingrowing nail.....	1											
Other diseases of the skin and annexa.....			2				4		5			
<i>Diseases of the bones and of the organs of locomotion.</i>												
Diseases of the bones (tuberculosis excepted).....	2		1				3	3	1			
Caries (nontuberculous).....	1											
Osteomyelitis.....							1					
Diseases of the joints (tuberculous and rheumatism excepted).....			1					2				
Arthritis.....			3					2	2			
Synovitis.....									1			
Amputations.....									1			
Other diseases of the organs of locomotion.....	1	1					4					

IN THE HOSPITALS OF THE PANAMA CANAL—Continued.

Colon Hospital.												Total.											
Employees.						Nonemployees.						Employees.						Nonemployees.					
Admis- sions.			Deaths.			Admis- sions.			Deaths.			Admis- sions.			Deaths.			Admis- sions.			Deaths.		
W.			W.			W.			W.			W.			W.			W.			W.		
Americans.	Europeans.	Black.	Americans.	Europeans.	Black.	Soldiers.	Others.	Black.	Soldiers.	Others.	Black.	Americans.	Europeans.	Black.	Americans.	Europeans.	Black.	Soldiers.	Others.	Black.	Soldiers.	Others.	Black.
																			1				
																		1					
																			9	4			
							1			2								2	4				
							1	2											1				
																		2	1				
																							1
							1												1				
	1												1	1				1	1				
												2	1										
													2	2				4					
2								2				3	3					4	2	2			
																			1				
																			2				
																			2		2		
																					1		
																					2		
2												3	1					4	1				

TABLE VII.—TABLE SHOWING ADMISSIONS AND DEATHS

Diseases.	Ancon Hospital.											
	Employees.						Nonemployees.					
	Admissions.			Deaths.			Admissions.			Deaths.		
	White.			White.			White.			White.		
	Americans.	Europeans.	Black.	Americans.	Europeans.	Black.	Soldiers.	Others.	Black.	Soldiers.	Others.	Black.
<i>Malformations.</i>												
Congenital malformations (stillbirth not included).....			1						3			
<i>Diseases of early infancy.</i>												
Newborn child.....								7	6			
Premature birth.....									1			1
Malnutrition.....									1			
Other causes peculiar to early infancy (including various consequences of labor).....												1
<i>Affections produced by external causes.</i>												
Poisoning by food.....												
Other acute poisonings.....		1										
Burns (conflagration excepted).....			4			1			1			
Traumatism by firearms.....			1				6					
Traumatism by cutting or piercing instruments.....			8				1	1	1			
Traumatism by fall.....	1		6	1			1	2				
Traumatism by machines.....			1									
Traumatism by other crushings (vehicles, railroads, landslides, etc.).....	1		9									
Railroad traumatism.....			1									
Injuries by animals.....							1					
Effects of heat.....									1			
Fracture (cause not specified).....	2		6				1	4	2			
Sprains.....			1									
<i>Ill-defined diseases.</i>												
Other external violence.....	5		15				4	5				
Infections of undetermined origin.....	1		3				4		1			
No disease.....	1		1				1	12	7			
Total.....	67	14	173	1		11	166	147	124	1	1	14

TABLE VIII.—CONSOLIDATED

[A=white Americans; F=white

	Remaining Apr. 1.			Admitted.			Died.		
	A.	F.	B.	A.	F.	B.	A.	F.	B.
ANCON HOSPITAL.									
Panama Canal employees.....	23	11	146	60	13	131	1	.....	7
Panama Railroad employees.....	6	.....	70	7	1	42	.....	.....	3
Panama pay patients.....	.....	.....	2	.....	1	1	.....	.....	.....
Other pay patients.....	109	27	49	247	52	86	2	.....	8
Charity patients.....	9	2	34	7	2	28	.....	.....	2
Total.....	147	40	301	321	69	288	3	.....	20
<i>Insane Department.</i>									
Panama Canal employees.....	.....	4	11	.....	.....	.....	.....	.....	.....
Panama Railroad employees.....	.....	.....	4	.....	.....	.....	.....	.....	1
Panama pay patients.....	1	24	166	.....	3	8	.....	.....	3
Other pay patients.....	5	4	4	.....	.....	.....	.....	.....	1
Charity patients.....	4	4	48	.....	1	1	.....	.....	.....
Total.....	10	36	233	.....	4	9	.....	.....	5
Grand total.....	157	76	534	321	73	297	3	.....	25
<i>Corozal Farm.</i>									
Panama Canal employees.....	.....	11	42	.....	.....	7	.....	.....	.....
<i>Chronic ward.</i>									
Charity patients.....	.....	.....	30	.....	.....	3	.....	.....	.....
COLON HOSPITAL.									
Panama Canal employees.....	4	1	4	15	1	14	.....	.....	.....
Panama Railroad employees.....	1	.....	9	2	.....	23	.....	.....	4
Panama pay patients.....	.....	.....	.....	.....	.....	11	.....	.....	1
Other pay patients.....	6	3	2	16	10	11	.....	.....	1
Charity patients.....	1	.....	1	.....	1	4	.....	.....	.....
Total.....	12	4	16	33	12	63	.....	.....	6
PALO SECO LEPER ASYLUM.									
Panama Canal employees.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Panama pay patients.....	.....	2	34	.....	.....	.....	.....	.....	.....
Charity patients.....	.....	2	18	.....	.....	.....	.....	.....	.....
Total.....	.....	4	53	.....	.....	.....	.....	.....	.....
GRAND TOTAL.									
Panama Canal employees.....	27	27	204	75	14	152	1	.....	7
Panama Railroad employees.....	7	.....	83	9	1	65	.....	.....	8
Panama pay patients.....	1	26	202	.....	4	20	.....	.....	4
Other pay patients.....	120	34	55	263	62	97	2	.....	10
Charity patients.....	14	8	131	7	4	36	.....	.....	2
Total.....	169	95	675	354	85	370	3	.....	31

Number of employees remaining in hospitals:

White.....	52
Black.....	246

Total.....	298
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HOSPITAL REPORT.

foreigners; B=blacks.]

Discharged.			Transferred.			Remaining Apr. 30.			Average number constantly sick.			
A.	F.	B.	A.	F.	B.	A.	F.	B.	White.		Black.	Total.
									American.	Foreign.		
60	16	146	.....	.....	2	22	8	122	25.87	9.60	135.20	170.67
10	1	50	.....	.....	3	3	.....	56	3.87	.30	60.03	64.20
.....	.....	.....	.....	1	2	.....	.....	1	.....	.40	2.37	2.77
251	44	81	.....	.....	103	35	46	.....	107.60	34.87	50.60	193.07
11	1	27	.....	.....	4	5	3	29	4.07	1.50	29.80	35.37
332	62	304	.....	1	11	133	46	254	141.41	46.67	278.00	466.08
.....	.....	.....	.....	.....	.....	.....	4	11	.....	4.00	11.00	15.00
.....	.....	1	.....	.....	.....	.....	2	.....	.....	.....	3.36	3.36
.....	1	2	.....	1	1	1	25	168	1.00	24.43	165.67	191.10
2	2	.....	.....	.....	.....	3	2	3	4.33	2.47	4.00	10.80
.....	.....	.....	.....	.....	.....	4	5	49	4.00	4.13	48.37	56.50
2	3	3	.....	1	1	8	36	233	9.33	35.03	232.40	276.76
334	65	307	.....	2	12	141	82	487	150.74	81.70	510.40	742.84
.....	1	6	.....	.....	.....	.....	10	43	.....	10.47	39.83	50.30
.....	.....	3	.....	.....	.....	.....	.....	30	.....	.....	31.20	31.20
12	1	11	3	.....	3	4	1	4	5.10	.16	4.56	9.82
3	.....	17	.....	.....	4	.....	.....	7	.50	.....	7.63	8.13
.....	.....	2	.....	.....	7	.....	.....	1	.....	.....	.86	.86
14	6	7	3	5	1	5	2	4	4.70	2.03	3.36	10.09
1	1	4	.....	.....	1	.....	.....	.....	.....	.33	.63	.96
30	8	41	6	5	16	9	3	16	10.30	2.52	17.04	29.86
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1.00	1.00
.....	.....	.....	.....	.....	.....	.....	2	34	.....	2.00	34.00	36.00
.....	.....	.....	.....	.....	.....	.....	2	18	.....	2.00	18.00	20.00
.....	.....	.....	.....	.....	.....	.....	4	53	.....	4.00	53.00	57.00
72	18	163	3	.....	5	26	23	181	30.97	24.23	191.59	246.79
13	1	68	.....	.....	7	3	.....	65	4.37	.30	71.02	75.69
.....	1	4	.....	2	10	1	27	204	1.00	26.83	202.90	230.73
267	52	88	3	5	1	111	39	53	116.63	39.37	57.96	213.96
12	2	34	.....	.....	5	9	10	126	8.07	7.96	128.00	144.03
364	74	357	6	7	28	150	99	629	161.04	98.69	651.47	911.20

TABLE IX.—CONSOLIDATED DISPENSARY REPORT.

EMPLOYEES TREATED IN QUARTERS.

	Re- maining Apr. 1.		Ad- mitted.		Died.		Dis- charged.		Trans- ferred.		Re- maining Apr. 30.		Days lost.		
	W.	B.	W.	B.	W.	B.	W.	B.	W.	B.	W.	B.	W.	B.	Total.
Ancon.....	4	.....	89	.....	.....	.....	89	.....	2	.....	2	.....	187	.....	187
Balboa.....	7	2	65	39	.....	.....	64	22	4	17	4	2	287	88	375
Pedro Mi- guel.....	1	.....	10	1	.....	.....	10	1	1	.....	.....	.....	36	3	39
Paraiso.....	3	.....	22	8	.....	.....	23	8	2	.....	.....	.....	62	10	72
Gamboa.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....
Gatun.....	1	.....	10	1	.....	.....	10	1	.....	.....	1	.....	41	23	64
Colon.....	4	18	38	34	.....	.....	39	31	.....	.....	3	21	245	456	701
Total.....	20	20	234	84	.....	.....	235	64	9	17	10	23	858	581	1,439

ALL CASES TREATED BUT NOT EXCUSED.

	Employees.			Nonemployees.			Total.		
	W.	B.	Total.	W.	B.	Total.	W.	B.	Total.
Ancon.....	2,206	3,184	5,390	1,656	2,210	3,896	3,862	5,424	9,286
Balboa.....	3,266	3,604	6,870	837	844	1,681	4,103	4,448	8,551
Pedro Miguel..	579	881	1,460	655	250	905	1,234	1,131	2,365
Paraiso.....	960	2,473	3,433	669	906	1,575	1,629	3,379	5,008
Gamboa.....	24	89	113	6	353	359	30	442	472
Gatun.....	355	1,302	1,657	611	1,230	1,841	966	2,532	3,498
Colon.....	942	2,173	3,115	658	845	1,503	1,600	3,018	4,618
Total....	8,332	13,706	22,038	5,092	6,668	11,760	13,424	20,374	33,798

CONSOLIDATED ADMISSIONS REPORT.

	White.	Black.	Total.
Total admissions to hospitals, excluding Corozal farm and chronic ward.....	439	360	799
Total admissions of employees to quarters.....	234	84	318
Total.....	673	444	1,117
Less number of patients transferred between hospitals, and from quarters to hospitals, whose admissions are duplicated in above figures.....	21	39	60
Net admissions to hospitals and quarters.....	652	405	1,057
Net admissions of employees to hospitals and quarters.....	321	265	586
Annual average per thousand of admissions of employees to hospitals and quarters.....	828.21	108.89	207.70

TABLE IX.—CONSOLIDATED DISPENSARY REPORT—Continued.

CONTAGIOUS AND INFECTIOUS DISEASES REPORTED.

Diseases.	Pana- ma.	Colon.	Canal Zone.	Total.
Measles.....	4	3	7	14
Typhoid fever.....	3	1	2	6
Annual average per 1,000.....	.59	.49	.73	.61
Scarlet fever.....	1	1		1
Mumps.....	1			1
Dysentery.....	2			2
Chicken pox.....	11		11	22
Diphtheria.....	4		1	5
Malaria fever.....	3		53	56
Tuberculosis.....	23	2	7	32
Whooping cough.....	1			1
Leprosy.....	1		1	2
Diarrhea.....			6	6
Pneumonia.....	2	2	1	5
Syphilis.....	3			3

† Two additional cases of typhoid occurred—one a passenger and the other a member of crew of ship, not included.

TABLE X.—NUMBER OF EMPLOYEES CONSTANTLY SICK IN HOSPITALS AND QUARTERS.

	White.	Black.	Total.
Hospitals:			
Ancon Hospital.....	43.64	209.59	253.23
Colon Hospital.....	12.82	17.04	29.86
Palo Seco Leper Asylum.....		1.00	1.00
Total.....	56.46	227.63	284.09
Quarters:			
Ancon.....	6.23		6.23
Balboa.....	9.57	2.93	12.50
Pedro Miguel.....	1.20	.09	1.29
Paraiso.....	2.07	.33	2.40
Gamboa.....		.03	.03
Gatun.....	1.33	.77	2.10
Colon.....	8.16	15.20	23.36
Total.....	28.56	19.35	47.91
	Hospi- tals.	Quarters.	Total.
Average number of employees constantly sick:			
White.....	56.46	28.56	85.02
Colored.....	227.63	19.35	246.98
Total.....	284.09	47.91	332.00
Average number of employees constantly sick per 1,000:			
White.....	12.14	6.14	18.28
Colored.....	7.79	.67	8.46
Total.....	8.39	1.42	9.81

TABLE XI.—AVERAGE LENGTH OF STAY IN HOSPITALS OR QUARTERS FOR EACH ADMISSION OF SICK EMPLOYEE.

	White.	Black.	Total.
Hospitals:			
Ancon Hospital.....	14.68	23.98	21.26
Colon Hospital.....	10.84	8.23	9.08
Quarters:			
Ancon.....	2.21		2.21
Balboa.....	4.18	2.41	3.53
Pedro Miguel.....	3.36	3.00	3.33
Paraiso.....	2.76	1.20	2.39
Gamboa.....		1.00	1.00
Gatun.....	4.10	23.00	5.82
Colon.....	7.46	20.67	13.31

TABLE XII.—FINANCIAL STATEMENT, DEPARTMENT OF HEALTH EXPENDITURES.

	March, 1916.	February, 1916.	March, 1915.
Administration: Chief health office.....	\$1,348.00	\$531.71	\$484.01
Hospital division:			
Ancon Hospital.....	24,974.26	24,867.92	29,055.31
Board of Health Laboratory.....	1,388.90	1,746.25	
Corozal farm.....	6,050.23	5,758.74	3,022.10
Chronic ward.....	218.97	194.78	237.57
Colon Hospital.....	3,842.12	3,663.76	3,539.03
Palo Seco Leper Asylum.....	1,564.08	1,639.30	2,044.54
Santo Tomas Hospital.....	714.75	757.00	629.49
Medical storehouse.....	817.00	1,016.41	795.22
	39,570.31	39,646.16	39,323.26
District dentists.....	¹ 125.31		15.88
Dispensaries:			
Naos Island.....			94.39
Balboa.....	1,124.83	1,068.21	1,076.85
Corozal.....		190.89	825.14
Pedro Miguel.....	451.04	461.72	496.78
Paraiso.....	600.58	441.20	596.18
Culebra.....	123.08		
Gamboa.....	149.34	138.71	138.78
Gatun.....	640.53	789.23	551.98
Toro Point.....		236.83	
	2,964.09	3,045.01	3,795.98
Sanitary division:			
General inspector.....	50.00	50.00	
Health office, Panama.....	3,015.54	3,099.03	2,908.43
Street cleaning.....	4,081.38	4,043.71	4,301.94
Health office, Colon.....	3,332.20	2,930.29	1,717.07
Street cleaning.....	2,229.52	2,284.34	2,020.39
Zone sanitation—			
Ancon.....	4,070.88	5,797.01	849.36
Balboa.....	3,207.32	2,812.59	643.81
Corozal.....	391.92	598.35	900.66
Pedro Miguel.....	4,007.73	3,560.80	696.32
Paraiso.....			756.18
Culebra.....			315.45

¹ Credit.

TABLE XII.—FINANCIAL STATEMENT, DEPARTMENT OF HEALTH
EXPENDITURES—Continued.

	March, 1916.	February, 1916.	March, 1915.
Sanitary division—Continued.			
Zone sanitation—Continued.			
Frijoles.....	\$69.07	\$84.16	\$111.50
Gatun.....	3,548.86	4,487.09	899.31
Cristobal-Mount Hope.....	2,426.42	2,524.62	1,036.25
	30,430.84	32,271.99	17,156.67
Quarantine division:			
Chief quarantine office.....	160.75	116.58	
Balboa-Panama.....	2,081.72	1,870.30	1,729.00
Colon-Cristobal.....	2,807.74	2,570.01	2,667.68
	5,050.21	4,556.89	4,396.68
RECAPITULATION.			
Chief health officer.....	1,348.00	531.71	484.01
Hospital division.....	39,570.31	39,646.16	39,323.26
Dispensaries.....	2,964.09	3,045.01	3,795.98
Sanitary division.....	30,430.84	32,271.99	17,156.67
Quarantine division.....	5,050.21	4,556.89	4,396.68
Total.....	79,363.45	80,051.76	65,156.60

March, 1916, last available figures.

TABLE XIII.—ANCON HOSPITAL.
REPORT OF NATIONALITY OF PATIENTS TREATED.

	Total number treated.	American.		Other nations.	
		White.	Black.	White.	Black.
Hospital:					
Panama Canal employees....	384	81	2	24	277
Panama Railroad employees....	126	13	.....	1	112
Panama Government pay cases.....	4	.....	.....	1	3
Other pay cases.....	570	356	.....	79	135
Charity cases.....	82	16	.....	4	62
Total.....	1,166	466	2	109	589
Asylum:					
Panama Canal employees....	15	.....	.....	4	11
Panama Railroad employees....	4	.....	.....	.....	4
Panama Government pay cases.....	202	.....	1	27	174
Other pay cases.....	13	5	.....	4	4
Charity cases.....	58	4	.....	5	49
Total.....	292	9	1	40	242
Grand total.....	1,458	475	3	149	831
Soldiers.....	244	244	.....	.....	.....
Chronics.....	33	.....	.....	.....	33
Cripples.....	60	.....	.....	11	49

TABLE XIII.—ANCON HOSPITAL—Continued.

REPORT OF DAYS LOST IN HOSPITAL.

	Total.	Amer- ican.	Other white.	Black.
Hospital:				
Panama Canal employees.....	5,120	776	288	4,056
Panama Railroad employees.....	1,926	116	9	1,801
Panama Government pay cases.....	83	.....	12	71
Other pay cases.....	5,792	3,228	1,046	1,518
Charity cases.....	1,061	122	45	894
Total.....	13,982	4,242	1,400	8,340
Asylum:				
Panama Canal employees.....	450	.....	120	330
Panama Railroad employees.....	101	.....	.....	101
Panama Government pay cases.....	5,733	30	733	4,970
Other pay cases.....	324	130	74	120
Charity cases.....	1,695	120	124	1,451
Total.....	8,303	280	1,051	6,972
Grand total.....	22,285	4,522	2,451	15,312
Soldiers.....	2,571	2,571	.....	.....
Chronics.....	936	.....	.....	936
Cripples.....	1,509	.....	314	1,195

Average cost of subsistence per patient per day, \$0.22809.

WARD LABORATORY REPORT.

Blood examinations, total number.....	548
Estivoautumnal.....	25
Tertian.....	17
Quartan.....	3
Differential counts.....	26
Hemoglobin estimations.....	41
Leucocyte counts.....	63
Red blood counts.....	3
Stool examinations, total number.....	303
Ameba.....	5
Ascaris lumbricoides.....	1
Ciliated monads.....	11
Entameba (hystolitica and tetragena).....	2
Guaiaac tests.....	7
Pus and blood.....	25
Strongloides.....	6
Tenia saginata dispar (ova).....	1
Tricocephalus dispar.....	10
Uncinaria (ova).....	11
Urine examinations, total number.....	1,450
Albumen.....	259
Bile.....	5
Casts.....	205
Ciliated monads.....	4
Epithelia.....	432
Guaiaac tests.....	1
Indicon.....	42
Pus and blood.....	336
Sugar (positive 16, negative 174).....	290
Sputum examinations, total number.....	182
Positive for tubercle bacilli.....	18
Smear examinations, total number.....	90
Urethral.....	25
Vaginal.....	2
Urine.....	5
Eye.....	1
Foot.....	1
Spinal fluid.....	11
Sputum.....	2

TABLE XIII.—ANCON HOSPITAL—Continued.
REPORT OF SURGICAL OPERATIONS PERFORMED.

	Number.	Died.
Amputations: Digits, multiple.....	1	.....
Operations on bones:		
Osteotomy.....	1	.....
Wiring of fractures, simple.....	3	.....
Wiring of fractures, compound.....	3	1
Adenectomy:		
Inguinal, single.....	13	.....
Inguinal, double.....	7	.....
Herniotomy:		
Inguinal, single.....	7	.....
Femoral.....	1	.....
Genito-urinary tract:		
Ureterotomy.....	1	.....
Urethrotomy, internal.....	2	.....
Urethrotomy, external.....	1	.....
Varicocele, radical cure.....	6	.....
Hydrocele, single, radical cure.....	2	.....
Hydrocele, double, radical cure.....	1	.....
Epididymotomy.....	11	.....
Amputation of scrotum.....	1	.....
Curetage uteri.....	4	.....
Perineoplasty.....	1	.....
Obstetrical:		
Cæsarean section, abdominal.....	2	1
Low forceps.....	1	.....
Rectum:		
Hemorrhoids, radical cure.....	6	.....
Fistula in anus, excision of.....	2	.....
General:		
Thyroidectomy.....	1	.....
Varicose veins, excision of.....	2	.....
Tenorrhaphy.....	2	.....
Laparotomy:		
For general peritonitis (not traumatic or appendicial).....	1	.....
Exploratory.....	2	.....
Gastrectomy, partial.....	1	.....
Gastro-enterostomy.....	1	.....
Appendectomy.....	12	.....
Cholecystostomy.....	1	.....
Cholecystectomy.....	2	.....
Supravaginal hysterectomy.....	5	1
Hysteromyomectomy.....	1	.....
Ovarian oystectomy.....	1	.....
Suspensio-uteri.....	3	.....
Rupture of spleen.....	1	.....
Minor operations.....	87	.....

REPORT OF OPERATIONS, EYE AND EAR DEPARTMENT.

Adenoidectomy.....	16
Advancement.....	1
Cataract extraction.....	4
Mastoidectomy.....	4
Minor eye.....	3
Minor ear.....	1
Minor throat.....	1
Maxillary sinusotomy, simple.....	1
Pterygium excision.....	3
Frontal sinusotomy.....	1
Submucous resection.....	9
Expression.....	1
Tonsillectomy.....	28
Turbinectomy.....	1
	74
Refractions.....	120

TABLE XIII.—ANCON HOSPITAL—Continued.

OUT-PATIENT DEPARTMENT.

	Total visits.	New cases.	Pay cases.	Prescrip- tions.
Medical clinic.....	286	196	57	262
Surgical clinic.....	193	70	10	15
Eye and ear clinic.....	591	235	14	306
Total.....	1,070	501	81	583

MONTHLY VACCINATION REPORT.

Number of adults vaccinated.....	115
Number of "takes".....	9
Number of school children vaccinated.....	3
Number of "takes".....	1

BOARD OF HEALTH LABORATORY.

Bacteriological examinations:	
Blood cultures.....	27
Throat cultures.....	46
Urines.....	34
Stools.....	27
Sputum.....	1
Pathological fluids, exudates, etc.....	7
Wassermann reactions.....	584
Leper suspects.....	2
Agglutination reactions.....	4
Autogenous vaccines prepared.....	1
Antityphoid vaccinations.....	3
Preparations of salvarzanized blood serum.....	3
Trypanosomes in horses.....	3
Water, for H. O. C.....	3
Animal inoculations.....	18
Dairy milk from Panama, bacteriological counts.....	52
Dairy milk from Corozal farm, bacteriological counts.....	30
Milk sediments.....	2
Dark field examinations.....	7
Blood for malaria.....	5
Chemical examinations:	
Milk from private dairies supplying cities of Panama and Colon.....	12
Mother's milk.....	6
Urines.....	13
Paint.....	1
Vino de Cardui.....	1
Gasoline.....	7
Kerosene.....	1
Heroin.....	1
Soda water.....	1
Crude carbolic acid.....	1
Chloride of lime.....	1
White brass.....	5
Water.....	1
Butyric acid.....	6
Surgical tissues neoplasms reported.....	24
Autopsies performed.....	24
Animals autopsied.....	14
Pathological tissues prepared, paraffin.....	215

Rats examined:	
<i>Mus musculus</i>	348
<i>Mus norvegicus</i>	774
<i>Mus alexandrinus</i>	8
<i>Mus rattus</i>	179
	1,309
Bodies embalmed.....	3
Interments at Corozal.....	14
Cremations.....	16

COROZAL HOSPITAL.

STATEMENT OF COMMITMENTS, DISCHARGES, AND DEATHS.

COMMITMENTS.

	Male.	Female.
From Canal Zone, first admission.....	3	.....
From Panama Government, first admission.....	2	5
From Panama Government (retransfer from Ancon Hospital)	13	.....
Total.....	8	5

¹ Had been transferred to Ancon Hospital for surgical treatment.

DISCHARGES.

	Well.		Improved.		Unimproved.	
	Male.	Female.	Male.	Female.	Male.	Female.
Barbados.....	1	.....	.....	.....	.....	.....
Panama.....	.....	.....	1	1	13	1
Philippines.....	.....	.....	.....	.....	21	.....
United States.....	.....	.....	.....	.....	32	.....
Total.....	1	.....	1	1	6	1

¹ Transferred to Ancon Hospital for surgical treatment.

² Deported to Philippines.

³ Deported to United States.

DEATHS.

Medical diagnosis.	Mental diagnosis.	Male.	Female.
Pellagra; infective exhaustive psychosis.	Infective exhaustive psychosis.	1	.....
Chronic nephritis; abscess of lungs; acute colitis.	Catatonic dementia praecox.	.....	1
Softening of the brain; embolism and thrombosis.	Epilepsy.....	1	.....
Cerebral syphilis; chronic alcoholism..	Cerebral syphilis.....	.....	1
Pellagra.....	Pellagra.....	.....	1

TABLE XIV.—COLON HOSPITAL.

NATIONALITY.

	White Ameri- can.	White foreign.	Black.	Total.
Panama Canal employees.....	19	2	18	39
Panama Railroad employees.....	3		32	35
Panama pay.....			11	11
Other pay.....	22	13	13	48
Charity cases.....	1	1	5	7
	45	16	79	140

Cost of subsistence per patient per day, 33 cents.

LABORATORY REPORT.

Blood examinations.....	56
Estivo-autumnal.....	7
Tertian.....	2
White blood counts.....	12
Hemoglobin.....	5
Differential counts.....	4
Stool examinations.....	14
Blood.....	1
Pus.....	1
Strongyloides.....	3
Uncinaria.....	0
Tricocephalus dispar.....	2
Urine examinations.....	159
Albumen.....	53
Casts.....	37
Epithelia.....	93
Pus.....	54
Blood.....	5
Indican.....	1
Sugar.....	1
Triple phosphates.....	21
Sputum examinations.....	8
Positive for tubercle bacilli.....	1
Smear examinations.....	6
Urethral.....	2
Vaginal.....	3
Eye.....	1

SURGICAL OPERATIONS.

Operations on bones: Osteotomy.....	1
Adenectomy:	
Inguinal, single.....	1
Femoral.....	1
Herniotomy:	
Inguinal, single.....	3
Inguinal, double.....	1
Genito-urinary tract: Curettage uteri.....	1
Rectum: Fistula in anus, excision of.....	1
General: Extensive injuries to soft parts, operation for.....	2
Laparotomy:	
Gastro-enterostomy.....	1
Appendectomy.....	4
Pan-hysterectomy.....	1
Suspensio-uteri.....	2
Minor operations, various.....	10
Minor operations, various (dispensary).....	147

TABLE XV.—PALO SECO LEPER ASYLUM.

NATIONALITY OF PATIENTS.

Class.	Number treated.		Americans.		Others.	
	White.	Black.	White.	Black.	White.	Black.
Panama Canal employees.....		1				1
Panama Railroad employees.....						
Pay cases.....	2	34			2	34
Charity cases.....	2	18			2	18
Total.....	4	53			4	53

Cost of subsistence, per patient, per day, 27 cents.

TABLE XVI.—SANTO TOMAS HOSPITAL.

	Remain- ing Apr. 1.	Ad- mitted.	Dis- charged.	Died.	Remain- ing Apr. 30.
Pay cases.....	20	45	37	3	25
Charity cases.....	393	747	661	66	413
Total.....	413	792	698	69	438

Average number of patients constantly sick..... 426
 Total number of days treatment..... 12,794
 Average number of days treatment for each patient..... 10

NATIONALITY.

Class.	Number treated.	Americans.		Other nations.	
		White.	Black.	White.	Black.
Pay cases.....	65	3		29	33
Charity cases.....	1,140	7	1	119	1,013
Total.....	1,205	10	1	148	1,046

DISPENSARY REPORT.

Class.	White.	Black.	Total.
Natives.....	25	564	589
Foreigners.....	46	344	390
Total.....	71	908	979

DISEASES TREATED.

Malaria.....	36
Influenza.....	3
Dysentery.....	3
Erysipelas.....	2
Other epidemic diseases.....	3
Purulent infection and septicemia.....	9
Pellagra.....	4
Tuberculosis of the lungs.....	16
Tuberculosis of other organs.....	1
Acute milary tuberculosis.....	1
Syphilis.....	41
Gonococcus infection.....	41
Alcoholism (acute or chronic).....	14
Other diseases of the spinal cord.....	1
Paralysis without specified cause.....	1
Other forms of mental alienation.....	8
Epilepsy.....	2
Follicular conjunctivitis.....	2
Other diseases of the nervous system.....	2
Other diseases of the eyes and their annexa.....	7
Acute endocarditis.....	1
Organic diseases of the heart.....	10
Diseases of the arteries, etc.....	1
Diseases of the veins.....	7
Diseases of the lymphatic system.....	17
Diseases of the nasal fossæ.....	2
Chronic bronchitis.....	4
Broncho-pneumonia.....	1
Pneumonia.....	11
Pleurisy.....	3
Other diseases of the mouth and annexa.....	1
Diseases of the pharynx.....	13
Ulcer of the stomach.....	1
Other diseases of the stomach.....	1
Diarrhea and enteritis (under 2 years).....	1
Diarrhea and enteritis (2 years and over).....	8
Ankylostomiasis.....	32
Appendicitis and typhlitis.....	4
Hernias, intestinal obstructions.....	9
Other diseases of the intestines.....	7
Cirrhosis of the liver.....	1
Other diseases of the liver.....	1
Bright's disease (chronic nephritis).....	14
Calculi of the urinary passages.....	1
Diseases of the bladder.....	3
Diseases of the urethra.....	4
Nonvenereal diseases of the male genital organs.....	8
Uterine hemorrhage (nonpuerperal).....	3
Uterine tumor (noncancerous).....	4
Metritis.....	7
Other diseases of the uterus.....	5
Salpingitis and other diseases of the female genital organs.....	22
Nonpuerperal diseases of the breast (cancer excepted).....	5
Normal labor.....	71
Accidents of pregnancy.....	24
Other accidents of labor.....	1
Puerperal albuminuria and convulsions.....	1
Acute abscess.....	14
Other diseases of the skin and annexa.....	35
Diseases of the bones (tuberculosis excepted).....	9
Diseases of the joints (tuberculosis and rheumatism excepted).....	7
Other diseases of the organs of locomotion.....	1
Congenital malformations (stillbirths not included).....	1
Nurslings discharged from hospital without disease.....	68
Other acute poisonings.....	1
Burns (conflagration excepted).....	2

Traumatism by firearms.....	6
Traumatism by cutting or piercing instruments.....	1
Traumatism by machines.....	1
Sprains.....	1
Fractures.....	8
Other external violence.....	28
Ill-defined organic disease.....	2
No disease.....	7
Total.....	698

SURGICAL OPERATIONS.

	Number.	Died.
Amputations, thigh.....	1	
Amputation, leg.....	1	
Amputations digits, multiple.....	1	
Laminectomy.....	1	
Ostectomy.....	1	
Adenectomy:		
Inguinal—		
Single.....	4	
Double.....	1	
Herniotomy:		
Inguinal—		
Single.....	7	
Double.....	1	
Urethrotomy:		
Internal.....	2	
External.....	1	1
Hydrocele, single, radical cure.....	5	1
Epididymotomy.....	1	
Curetage uteri.....	8	
Vaginal punctures.....	1	
Perineorrhaphy.....	2	
Thoracotomy.....	1	
Hemorrhoids, radical cure.....	6	
Fistula in anus, excision of.....	1	
Myorrhaphy.....	1	
Excision of surface neoplasm.....	1	
Plastic operations for effects of disease.....	18	
Laparotomy for intestinal obstructions.....	1	1
Laparotomy, exploratory.....	1	
Appendectomy.....	3	
Appendectomy with general peritonitis.....	1	1
Abscess of liver, laparohepatotomy for.....	1	
Pan-hysterectomy.....	3	
Salpingectomy, double.....	1	
Salpingo-oophorectomy.....	3	
Ovarian cystectomy.....	1	
Suspensio-uteri.....	4	
For eutopic gestation.....	2	
Gunshot wound of abdomen.....	1	1
Minor operations, various.....	51	
Cataract extractions.....	3	
Pterygium.....	1	
Tonsillectomy.....	8	
Total.....	151	5

TABLE XVII.—SANITATION.

The following is a summary of sanitary work performed and material expended during the month of April, 1916, in the Canal Zone:

Work requests on supply department:	
Grass cutting.....	4
Screening.....	10
Miscellaneous.....	6
Work requests on engineering department.....	9
Work requests on other departments.....	3
Notices served to abate nuisances.....	0
Arrests and convictions.....	0
Closets, inspections of.....	748
Stores, inspections of.....	40
Shops, inspections of.....	79
Garbage cans emptied.....	3,074
Closets disinfected.....	1,133
Rat traps in use.....	525
Rats destroyed.....	358
Adult anopheles caught.....	3,430
Adult culices caught.....	7,503
Stegomyia destroyed.....	34
Larvacide used..... gallons.....	258
Crude oil used..... do.....	7,115
Kerosene used..... do.....	525

SUMMARY OF ROUTINE WORK DONE BY PANAMA HEALTH OFFICE.

Mosquito, rat, and fly work:	
Linear feet of ditches cleaned and maintained.....	30,620
Linear feet of new ditches dug.....	1,318
Number of cubic yards of earth used in filling.....	0
Gallons of larvacide used.....	350
Gallons of crude oil used.....	1,315
Square yards of pools oiled.....	70,280
Water containers treated.....	9,547
Mosquito breeding places found (stegomyia 130).....	217
Fly breeding places found.....	84
Flies trapped, quarts (13,000 per quart).....	59
Number of rats killed.....	1,014
Number of room disinfections.....	17
Garbage collection:	
Number of loads of garbage removed to dump.....	4,156
Number of cubic yards of garbage removed to dump.....	9,561
Total number of cans of garbage emptied.....	42,171
Buildings:	
Number of buildings inspected.....	4,874
Number of plans for new buildings approved.....	21
Number of permits issued for repairs to old buildings.....	66
Total number of building permits issued.....	87
Number of buildings condemned.....	14
Number of buildings demolished (stables 0).....	2
Number of stables condemned.....	5
Street cleaning:	
Average number of square yards of streets cleaned daily.....	600,000
Average number of square yards sprinkled daily.....	90,000
Number of private properties cleaned.....	4
Number of notices served and nuisances abated.....	400
Cementing tree cavities:	
Total number of trees treated in entire city.....	1,611
Approximate number of holes ("containers") closed.....	4,108
Average cost per tree.....	\$0.075

MONTHLY WORK REPORT FOR COLON AND CRISTOBAL AND MOUNT HOPE.

Sanitation, Colon-Cristobal:

Square yards street cleaned.....	3, 895, 800
Square yards street sprinkled.....	705, 600
Square yards alleys maintained.....	621, 000
Number of private properties cleaned.....	667
Number of rats caught.....	195
Number of dogs caught.....	178
Number of dogs killed.....	142
Loads of yard garbage disposed of.....	585
Number of cans, garbage (cubic yards 2,305).....	65, 113
Colon dump maintained.....	
Linear yards ditches maintained.....	95
Acres of vegetation removed:	
Colon.....	0
Quarantine station.....	3
Panama Railroad properties, Colon.....	30
Parkway and E Street maintained.....	
Square yards oiled.....	28, 275
Number of receptacles treated.....	47, 470
Number of mosquito breeding places destroyed.....	7
Number of fly breeding places destroyed.....	27
Number of buildings inspected.....	10, 315
Gallons of larvacide used in Colon.....	59 $\frac{1}{2}$
Gallons of crude oil used in Colon.....	468
Number of nuisances abated.....	315

Building, Colon:

Number of building plans approved.....	7
Number of permits to occupy issued.....	16
Number of permits to repair issued.....	25
Number of bills collected.....	188

Sewers, Colon:

Number of new connections made during the month.....	11
Total number of connections made to date.....	1, 290
Number of houses in which connections were made.....	7
Outstanding permits.....	72

Sanitation, Cristobal:

Number of cans, garbage (cubic yards 685).....	13, 942
Square yards of grading on fill at Camp Bied.....	5, 000
Loads of yard garbage handled.....	218
Acres of vegetation removed.....	$\frac{3}{4}$
Square yards oiled.....	4, 525
Number of receptacles treated.....	7, 600
Number of mosquito breeding places destroyed.....	1
Number of fly breeding places destroyed.....	2
Gallons of crude oil used.....	104
Gallons of larvacide used.....	61
Number of buildings inspected.....	1, 020
Number of nuisances abated.....	43

Sanitation, Mount Hope:

Number of cans, garbage (124 cubic yards).....	1, 361
Square yards oiled.....	66, 200
Number of receptacles treated.....	7, 450
Number of mosquito breeding places destroyed.....	24
Number of fly breeding places destroyed.....	0
Number of mosquitoes caught in barracks—	
Anopheles.....	119
Culex.....	219
Gallons of larvacide used.....	41
Gallons of crude oil used.....	181
Mount Hope Cemetery maintained.....	
Linear yards of ditches constructed.....	0
Linear yards of ditches maintained.....	13, 887
Square yards of vegetation removed.....	181, 290
Number of burials during month.....	54

TABLE XVIII.—CONSOLIDATED REPORT OF QUARANTINE TRANSACTIONS AT THE PORTS OF BALBOA-PANAMA AND COLON-CRISTOBAL.

Number of vessels inspected and passed.....	146
Number of vessels held in quarantine.....	10
Total number of vessels entered.....	156
Number of special inspections made to enforce compliance with anti-plague and mosquito-breeding regulations.....	116
Number of vessels fumigated on arrival.....	11
Number of vessels fumigated on departure.....	3
	14
Number of crew examined.....	10,490
Number of passengers examined.....	3,577
	14,067
Number of supplementary inspections.....	1,047
Number of stowaways inspected.....	5
Number of persons vaccinated at port of arrival because of compulsory-vaccination law.....	270
Number of persons vaccinated at port of departure or en route because of compulsory-vaccination law.....	1,361
Number of persons held in quarantine at the detention houses to complete period of incubation of yellow fever and bubonic plague.....	391
Number of persons held in quarantine on board vessels to complete period of incubation of yellow fever and plague.....	1,306
Total number of persons held under observation.....	1,697
Total number of persons landed from foreign ports:	
Cabin.....	1,523
Steerage.....	1,367
	2,890
Total number of persons embarked for foreign ports:	
Cabin.....	1,753
Steerage.....	1,177
	2,930
Total number of persons arriving from coast towns on small launches and sailing craft.....	2,163
Total number of persons sailing for coast towns on small launches and sailing craft.....	1,559
Apparent increase for month from coast towns.....	604
Apparent decrease for month from foreign ports:	
Cabin.....	230
Steerage.....	190
Net decrease for month.....	40
Number of persons rejected and deported.....	22
Number of bills of health issued or viséed.....	159
Number of inspections of docks.....	23
Number of inspections of vessels at docks.....	101
Total number of persons landed.....	5,053
Less number for Pacific ports.....	196
Total number of persons sailing.....	4,857
Total apparent increase for month.....	4,489
	368

IMMIGRATION REPORT FOR COLON AND CRISTOBAL.

From—	Cabin.	Steerage.
Europe.....	11	7
United States.....	506	585
Jamaica and West Indies.....	96	337
Venezuela.....	15	6
Colombia.....	111	58
Cuba.....	53	22
Costa Rica.....	191	20
Bocas del Toro.....	59	134
Coast towns.....		162
Total.....	1,042	1,331

Grand total..... 2,373

Men.....	875
Women.....	538
Children.....	229
United States troops.....	569
Unclassified.....	162

2,373

QUARANTINE, BOCAS DEL TORO.

Vessels inspected and passed.....	17
Number of crew inspected and passed.....	1,216
Number of passengers inspected and passed.....	179
Passengers in transit, inspected and passed.....	118

No quarantinable disease has appeared in this port, and the health conditions of the port and surrounding territory continue good.

TABLE XIX.—STATEMENT OF QUININE ISSUED.

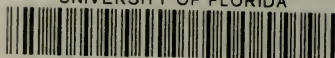
Quinine sulphate.....	kilos..	18.50
Pounds avoirdupois.....		47.87

TABLE XX.—PERSONNEL REPORT.

	April, 1916.			March, 1916— total.	April, 1915— total.
	Gold em- ployees.	Silver em- ployees.	Total em- ployees.		
Chief health office.....	4	.....	4	4	3
Medical storehouse.....	4	4	8	8	8
Quarantine division.....	11	34	45	43	39
Health office, Panama.....	11	140	151	150	156
Health office, Colon ¹	10	153	163	167	140
Ancon Hospital.....	117	251	368	363	315
Colon Hospital.....	16	25	41	43	35
Santo Tomas Hospital.....	6	.....	6	6	5
Palo Seco Leper Asylum.....	2	20	22	24	24
Zone sanitation.....	7	110	117	114	99
Hospital farm, Corozal.....	2	56	58	58	49
Dispensaries:					
Balboa.....	4	2	6	8	6
Corozal.....	.....	.....	.....	.....	4
Gamboa.....	1	.....	1	1	2
Gatun.....	2	2	4	4	6
Naos Island.....	.....	.....	.....	.....	2
Paraiso.....	2	2	4	4	4
Pedro Miguel.....	2	1	3	3	3
Total.....	201	800	1,001	1,000	900

¹ Includes employees at Cristobal and Mount Hope.

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